HUM01 ENGINEERING ECONOMICS(4-0-0)

MODULE- 1

Theory of Demand- Modern Utility Theory, The Neumann- Morgenstern approach, The Friedman-Savage Hypothesis, Uncertainty and Consumer Behaviour, Expected value of Perfect Information, Revealed Preference Theory, Intertemporal Choice- Slutsky equation, Annual Economic Worth, Present Value, Discount rate IRR and NPV

MODULE- 2

Profit Maximisation: Theory of Production- Laws of Production, Returns to scale and variable proportions, Equilibrium of firm, and Choice of optimal combination of factors, Cost Minimisation- Calculus analysis of cost minimisation, Algebric approach to cost minimisation, average and marginal costs- the short run Cobb- Douglas cost function, constant returns to scale and cost functions, Long run and short run curves- factor prices and cost functions , The envelop theorem for constrained optimisation , Cost control techniques, Critique of the principle of profit maximisation and Modern theories of firms- Baumol's sales maximisation hypothesis, Morris Model of Managerial Enterprise, Hall and Hitch Report and the full cost pricing principle, Bain's limit pricing theory

MODULE- 3

Analysis of Public Projects: Benefit cost analysis, Public goods, Common Property, Free Rider Problem, market failure and externalities, private and social cost, Social Welfare Functions- Welfare maximisation and pare to optimality, market responses to externalities- Mergers, social conventions, property right and bargaining case theorem

MODULE- 4

Linear models: simple regression model -the problem and estimation, classical normal linear regression model, Two- Variable regression- Internal estimation and hypothesis testing, Multiple Regression analysis- The problem of estimation, Dummy Variable Regression Models, Multiple parameter sensitivity analysis, linear Programming- graphic and simplex method; Game theory- the pay off matrix of game, Nash Equilibrium, the mixed strategies and the prisoner's dilemma

READING LIST

1. Varian, H.R. (1992). Introduction to Micro Economic Analysis, Norton and company, New York
2. Woolridge, J.M. (2009). Introductory Econometrics- A Modern Approach, South Western CENGAGE learning
3. Pearce, D.W. and Turner.(1990). Economics of Environment and Natural Resources, Harvester Wheatsheaf. New York
4. Koutsoyiannis, A.(1979). Modern Micro Economics, Macmillan, London
5. Damodaran, S. (2012). Managerial Economics, second Edition, OUP
6. Gujrati and Sangeeta. (2007). Basic Econometrics, TMH, New Delhi
7. Kolstad, C.D. (2000). Environmental Economics, OUP